

ABSTRACT

Disclosed is a rollback-free method for performing multi-step procedures in the presence of possible failure. As the procedure proceeds from its initial state through transitions to its final state, its constituent transitions are monitored for failure. If a failure is detected, then the procedure is "sidetracked" into a recovery coordination state. From the recovery coordination state, the procedure is logically taken back to its initial state and retried. In this manner, the procedure is shepherded, without rollbacks, through its transitions until it successfully reaches its final state. In a particular embodiment, a multi-step procedure is developed for moving a resource from one resource server to another. The steps of the procedure are designed so that all throughout the procedure, both of the resource servers and a directory server are kept synchronized. This allows client requests to proceed without interruption even during the resource movement.